

WHAT IS CLAIMED IS:

1. A volume control apparatus of a radial piston pump or a motor for regulating a volume by positioning a cam ring of the radial piston pump or the motor, comprising:

a control valve positioned at a position in correspondence to a volume control pressure; and

a servo piston having said control valve built-in, being operated following to the control valve and pressing said cam ring so as to position the cam ring.

2. A volume control apparatus of a radial piston pump or a motor as claimed in claim 1, wherein one set of said control valve and said servo piston and another set of said control valve and said servo piston are provided at opposing positions with respect to said cam ring.

3. A positioning apparatus comprising:

a control valve positioned at a position in correspondence to a control pressure; and

a servo piston having said control valve built-in, being operated following to the control valve and pressing a positioning member so as to position the positioning member.

4. A positioning apparatus comprising:

a control valve carrying out a stroke in correspondence to a control pressure applied to a pressure receiving surface; and

a servo piston having said control valve built-in and pressing a positioning member in correspondence to a driving pressure,

wherein a throttle is formed between said control valve and said servo piston, in such a manner that the driving pressure introduced to said servo piston is increased in accordance that said control valve carries out the stroke relatively close to said positioning member with respect to said servo piston, and the driving pressure introduced to said servo piston is reduced in accordance that said servo piston carries out the stroke relatively close to said positioning member with respect to said control valve,

wherein a spring for generating a spring force opposing to said control pressure is applied to said control valve,

wherein said control pressure is applied to said pressure receiving surface so as to carry out a stroke of said control valve, said servo piston carries out a stroke following to said control valve on the basis of the driving pressure introduced via said throttle, and

wherein said control valve is positioned at a position where the spring force of said spring and said control pressure are balanced, and said servo piston is positioned in accordance the positioning of the control valve.